
6. ImageFlip

Program Name: ImageFlip.java

Input File: imageflip.dat

Modern art is sometimes hard to appreciate. In the 1960s, the Museum of Modern Art in New York City hung a Henri Matisse painting upside-down for over a month! In order to help modern artists out, you need to install two buttons on each painting. One button flips the painting horizontally, and the other button flips paintings vertically. That way, museum visitors can view the paintings in the orientation they like.

Input

The file begins with an integer T ($1 \leq T \leq 10$). After that, T test cases follow. Each test case begins with two integers and a character, N , M , and C ($1 \leq N, M \leq 30$). N is the height of the field, M is the width of the field, and C is either H or V, representing horizontal and vertical flips respectively. After that follows N lines, each with M characters, representing blocks of color in the paintings. Each block of color is represented by a capital letter (A–Z).

Output

For each test case, print the painting reflected appropriately. Print a blank line between test cases.

Example Input File

```
2
2 2 H
AB
CD
3 3 V
XYZ
WAB
CDE
```

Example Output to Screen

```
BA
DC

CDE
WAB
XYZ
```